

## ULTRA LOW JITTER LVDS CLOCK OSCILLATOR

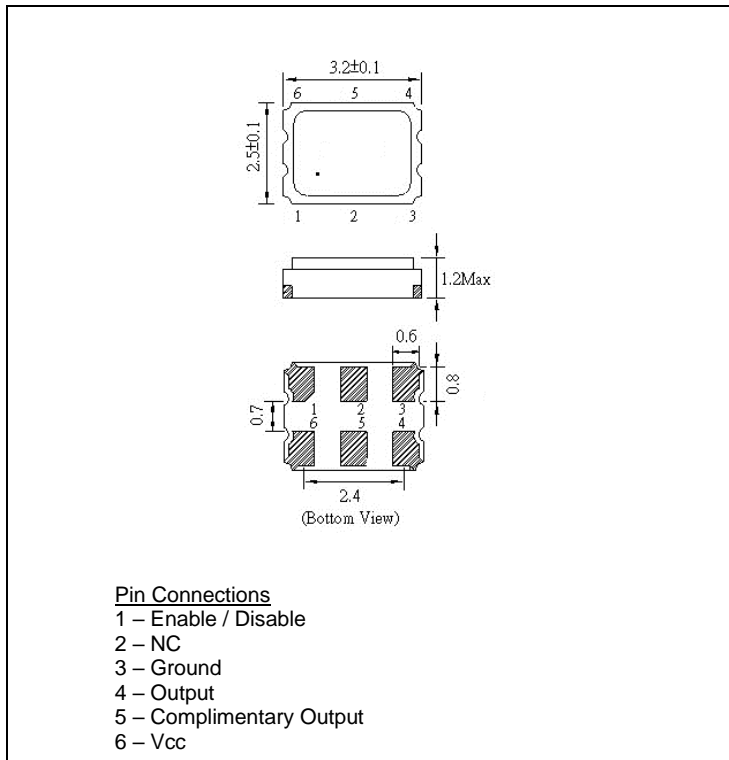
CL3225-156.250-3.3-25-X-T-TR



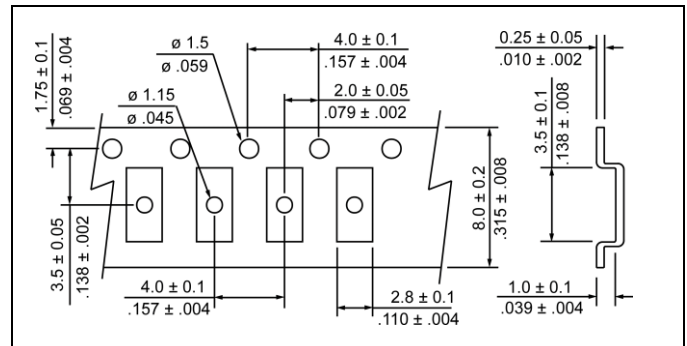
### ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	CONDITIONS	VALUE	UNIT
Nominal Frequency	$f_o$	$T_a=25^{\circ}\text{C}$	156.200	MHz
Supply Voltage	$V_{CC}$	$V_{CC} \pm 5\%$	3.3	VDC
Supply Current, max	$I_s$	$V_{CC}; T_a=+25^{\circ}\text{C};$	40	mA
Operating Temperature Range	$T_a$	---	-40 to +85	$^{\circ}\text{C}$
Storage Temperature Range	$T_{(stg)}$	Absolute max	-55 to +125	$^{\circ}\text{C}$
Output Logic Type	---		LVDS	
Overall Freq. Stability, Max.	$\Delta f/f_o$	Inclusive of $25^{\circ}\text{C}$ Tolerance and Changes due to Operating Temperature, Supply Voltage, Load, Aging, Shock and Vibration	$\pm 25$	ppm
Output Voltage	$V_{OL}$	Logic "0" Level	0.9 Min	VDC
	$V_{OH}$	Logic "1" Level	1.6 Max	VDC
Output Load	---	Connected between Out and Complementary Out	100	$\Omega$
Enable / Disable Function	E/D	Pin 1: N.C. (Open) or High ( $0.7 \times V_{CC}$ )	Pin 4 & 5 – Oscillation (Enabled)	
		Pin 1: Low ( $0.3 \times V_{CC}$ )	Pin 4 & 5 – High Impedance (Disabled)	
Symmetry (Duty Cycle)	DC	@50% Wave form	45 to 55	%
Rise Time and Fall Time	$t_r / t_f$	@20% to 80% Vdd	1.0	ns
Jitter, RMS, typ/max.	J	$1\sigma, 12\text{kHz} < F_j < 20\text{MHz}$	0.8/1.0	ps

### MECHANICAL SPECIFICATION



### CARRIER TAPE DIMENSIONS



NOTE: REFER TO EIA-481 FOR DIMENSIONS NOT LISTED

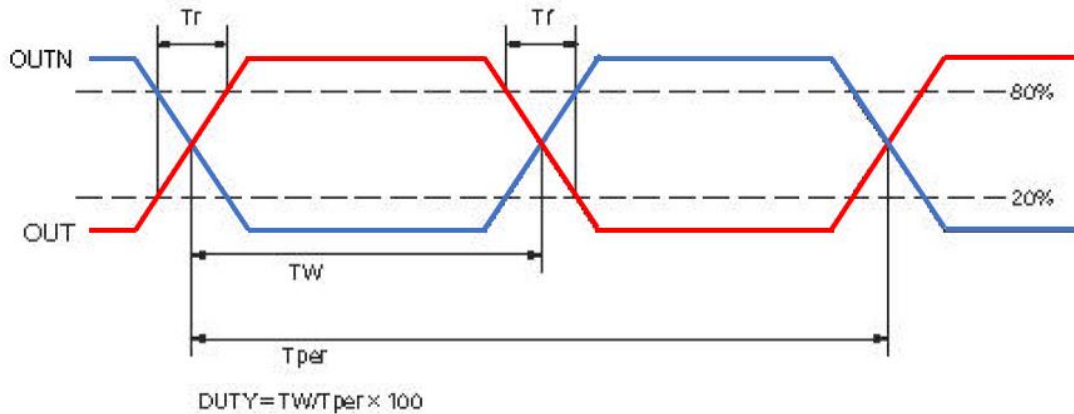
### PACKAGING

178 mm REEL DIAMETER  
8 mm TAPE WIDTH, 4 mm PITCH  
QUANTITY: 3000 PIECES PER REEL

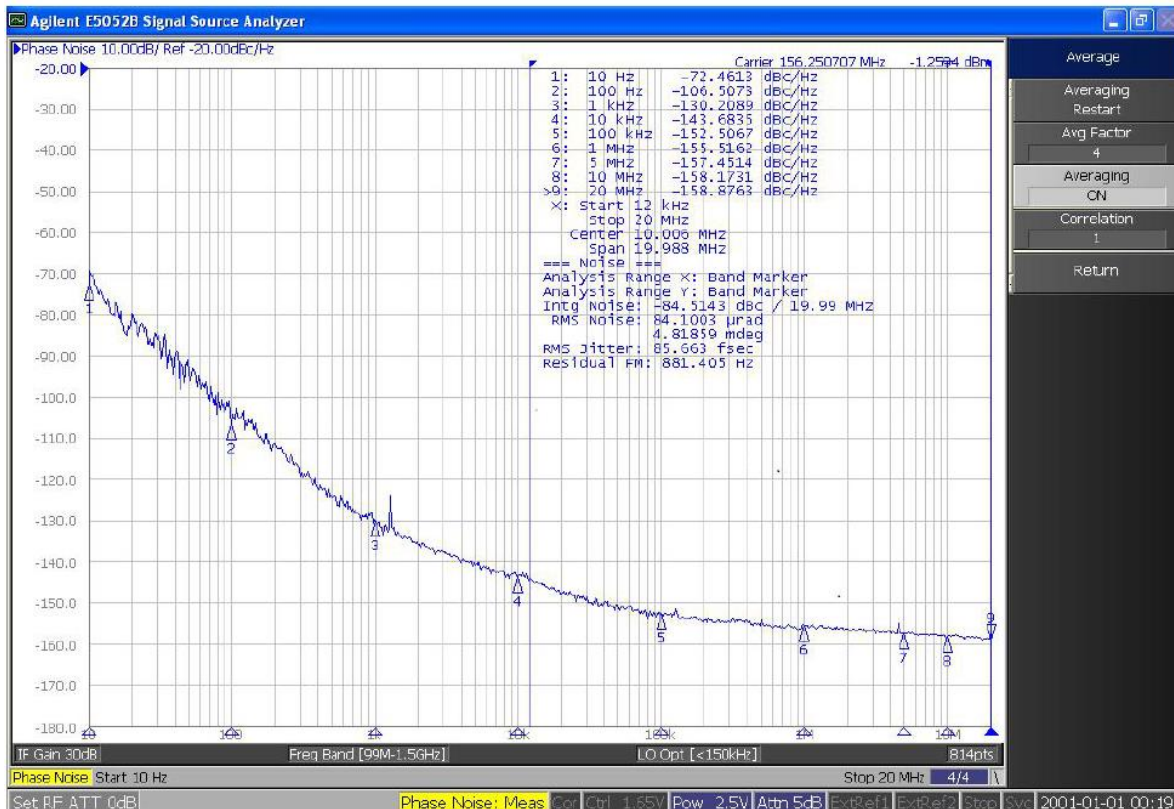
## ULTRA LOW JITTER LVDS CLOCK OSCILLATOR

CL3225-156.250-3.3-25-X-T-TR

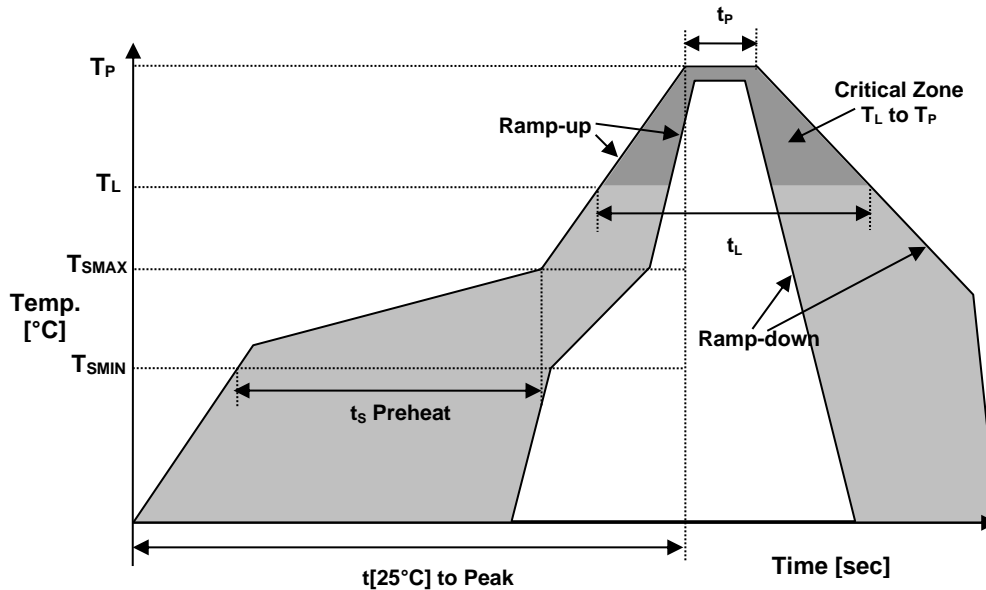
### OUTPUT WAVEFORM



### PHASE NOISE



#### REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	$T_{SMIN}$	150°C
Temperature Max Preheat	$T_{SMAX}$	200°C
Time ( $T_{SMIN}$ to $T_{SMAX}$ )	$t_s$	60-180 sec.
Temperature	$T_L$	217°C
Peak Temperature	$T_P$	260°C
Ramp-up rate	$R_{UP}$	3°C/sec max.
Ramp-down rate	$R_{DOWN}$	6°C/sec max.
Time within 5°C of Peak Temperature	$t_p$	10 sec.
Time $t[25^\circ\text{C}]$ to Peak Temperature	$t[25^\circ\text{C}]$ to Peak	480 sec.
Time	$t_L$	60-150 sec.

#### ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	Compliant
REACH-SVHC	Compliant
HALOGEN-FREE	Compliant
TERMINATION FINISH	Au



## ULTRA LOW JITTER LVDS CLOCK OSCILLATOR

CL3225-156.250-3.3-25-X-T-TR

### MARKING

Rx156.2  
•3AEyw

x – Internal Production ID code  
y – Year code  
w – Week code

YEAR CODE	
Year	Code
2015	5
2016	6
2017	7
2018	8
2019	9
2020	0
2021	1
2022	2
2023	3
2024	4
2025	5

ALPHA WEEK CODE TABLE					
Week	Code	Week	Code	Week	Code
1	a	19	s	37	K
2	b	20	t	38	L
3	c	21	u	39	M
4	d	22	v	40	N
5	e	23	w	41	O
6	f	24	x	42	P
7	g	25	y	43	Q
8	h	26	z	44	R
9	i	27	A	45	S
10	j	28	B	46	T
11	k	29	C	47	U
12	l	30	D	48	V
13	m	31	E	49	W
14	n	32	F	50	X
15	o	33	G	51	Y
16	p	34	H	52	Z
17	q	35	I		
18	r	36	J		

### APPROVAL

RALTRON	
DRAWN BY:	AR, January 21, 2019
APPROVED BY:	CP, January 21, 2019
REVISION:	A, Initial Release
	B, Updated the Current Revision Levels
	AR, May 21, 2020

Raltron Electronics / RAMI Technology USA, LLC, including its affiliates, employees, agents and other persons acting on its behalf (collectively Raltron/RAMI Tech), disclaim any and all liability for any errors or inaccuracies contained in this data sheet. While Raltron/RAMI Tech has made every reasonable effort ensure the accuracy of all product information, specifications and data contained herein, Raltron/RAMI Tech does not guarantee that the information is accurate, reliable or current. The product information is provided only for reference purposes only and is subject to change, correction or revision, at any time without notice. Raltron/RAMI Tech does not assume any liability arising out of an application or use of any product described herein and disclaims any warranties expressed or implied. The user of products in such applications shall assume all risks of such use and will agree to hold Raltron/RAMI Tech, harmless against all damages.

Copyright © 2016, Raltron Electronics / RAMI Technology USA, LLC. All rights reserved. No part of this document may be reproduced in any form without the prior written permission of Raltron Electronics / RAMI Technology USA, LLC.